

Application No.: 10/509,491

RECEIVED  
CENTRAL FAX CENTER  
JAN 14 2008REMARKS**I. Introduction**

Applicants note with appreciation, the indication of allowable subject matter recited in claims 24 and 25.

For the reasons set forth below, Applicants respectfully submit that all pending claims are patentable over the cited prior art references.

**II. The Rejection Of Claims 1, 4-13 And 15-23 Under 35 U.S.C. § 103**

Claims 1, 4-13 and 15-23 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Hasegawa et al. (USP No. 6,778,355) in view of Yamamoto et al. (USP No. 6,503,858). Applicants respectfully traverse this rejection of the pending claims for at least the following reasons.

With regard to the present invention, amended claims 1 and 4 both recite a Bismuth glass composition containing rare earth element oxides of Group C which is at least one selected from the group consisting of  $\text{Sc}_2\text{O}_3$ ,  $\text{Y}_2\text{O}_3$ ,  $\text{La}_2\text{O}_3$ ,  $\text{CeO}_2$ ,  $\text{Pr}_2\text{O}_3$ ,  $\text{Nd}_2\text{O}_3$ ,  $\text{Sm}_2\text{O}_3$ ,  $\text{Eu}_2\text{O}_3$ ,  $\text{Gd}_2\text{O}_3$ ,  $\text{Tb}_2\text{O}_3$ ,  $\text{Dy}_2\text{O}_3$ ,  $\text{Ho}_2\text{O}_3$ ,  $\text{Er}_2\text{O}_3$ ,  $\text{Tm}_2\text{O}_3$ ,  $\text{Yb}_2\text{O}_3$  and  $\text{Lu}_2\text{O}_3$ .

It is alleged that the combination of Yamamoto and Hasegawa renders the pending claims obvious. The Examiner has admitted that Hasegawa fails to teach an oxide of group C, yet cites Yamamoto to remedy this deficiency. However, Applicants submit that this combination is improper.

Hasegawa recites a glass composition primarily consisting of  $\text{Bi}_2\text{O}_3$  (55-90 wt%) in addition to  $\text{ZnO}$ ,  $\text{B}_2\text{O}_3$ ,  $\text{SiO}_2$  and  $\text{Al}_2\text{O}_3$ . However, Hasegawa recites no  $\text{PbO}$  in the composition.

**Application No.: 10/509,491**

In contrast, Yamamoto discloses a glass composition whose major constituent is PbO (44-91 wt%), but contains no Bi<sub>2</sub>O<sub>3</sub>. As such, each composition consists of one major component that is not present in the other reference. If one were to use the minor components of one composition in the other, the desired properties would not necessarily be imbued in the other. Accordingly, the components of each composition are not readily interchanged with each other and as such, it would not be obvious to add a component of Yamamoto (i.e., the rare earth elements) to Hasegawa, and *visa versa*.

Furthermore, the glass composition of Yamamoto is in a heterogeneous state in which crystalline particles of a rare earth element oxide are dispersed in a matrix. This state corresponds to "devitrification" as discussed in the present specification. As a result, the PbO composition of Yamamoto would suffer an increased risk of crack formation and the hermeticity and mechanical strength of the glass is reduced. In addition, this causes the bonding strength and adhering strength thereof to magnetic heads, plasma displays and the like to be weakened. As such, the use of the elements of Yamamoto may have a detrimental effect to the properties of the composition of Hasegawa.

As is well known, if a proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification. *In re Gordon*, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984). As such, since the combination of Yamamoto and Hasegawa would render the combination unsatisfactory for its intended purpose as discussed above, there is no suggestion or motivation to combine Yamamoto and Hasegawa. As such, Applicants respectfully request that the § 103 rejection be withdrawn.

Application No.: 10/509,491

**III. All Dependent Claims Are Allowable Because The  
Independent Claim From Which They Depend Is Allowable**

Under Federal Circuit guidelines, a dependent claim is nonobvious if the independent claim upon which it depends is allowable because all the limitations of the independent claim are contained in the dependent claims, *Hartness International Inc. v. Simplimatic Engineering Co.*, 819 F.2d at 1100, 1108 (Fed. Cir. 1987). Accordingly, as claims 1 and 4 are patentable for the reasons set forth above, it is respectfully submitted that all pending dependent claims are also in condition for allowance.

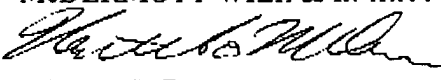
**IV. Conclusion**

Having responded to all open issues set forth in the Office Action, it is respectfully submitted that all claims are in condition for allowance.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,

McDERMOTT WILL & EMERY LLP

 Reg No. 53,308  
for Michael E. Fogarty  
Registration No. 36,139

600 13<sup>th</sup> Street, N.W.  
Washington, DC 20005-3096  
Phone: 202.756.8000 MEF:NDM  
Facsimile: 202.756.8087  
Date: January 14, 2008

Please recognize our Customer No. 53080  
as our correspondence address.